

**SECOND ANNOUNCEMENT AND CALL FOR PAPERS**

# **Twentieth Symposium on Thermophysical Properties**



# 20

**[thermosymposium.nist.gov](http://thermosymposium.nist.gov)**

**June 24 - 29, 2018  
University of Colorado at Boulder**

**Organized by:**

- National Institute of Standards and Technology
- Joint ASME-AIChE Committee on Thermophysical Properties

# CALL FOR PAPERS

*Abstracts of 200-300 words must be received by **November 22, 2017**.*

The abstracts must be submitted through the Symposium web page at <http://thermosymposium.nist.gov>. Please refer to the website for the most recent information.

*The content of the abstracts will be the basis for acceptance of papers for presentation at the Symposium.*

Oral, Poster, and Database Demonstration Sessions will be held as part of the Twentieth Symposium on Thermophysical Properties. Prospective authors will be asked to indicate whether a poster presentation, oral presentation, or database demonstration is preferred. The organizers will attempt to honor such requests, although the organization of sessions may necessitate changes. Information on your presentation will be included in the acceptance letters to be sent in December 2017.

Papers describing all work presented at the Symposium are encouraged, but not required. Work presented at the conference may be published in one of four journals: International Journal of Thermophysics, Fluid Phase Equilibria, the Journal of Chemical and Engineering Data, and Fuel Processing Technology. Manuscripts should be submitted directly to the conference journal of your choice, through the journal website. All manuscripts will be reviewed prior to acceptance for publication.

## PLENARY AND KEYNOTE SPEAKERS

### **Dr. Juan de Pablo**

Liew Family Professor of Molecular Engineering  
Institute for Molecular Engineering  
University of Chicago

### **Dr. William Tumas**

Associate Laboratory Director, Materials and  
Chemical Science and Technology  
National Renewable Energy Laboratory (NREL)

### **Dr. Lourdes F. Vega**

Joint Chair Professor  
Gas Research Center | Dept. of Chemical Engineering  
Khalifa University of Science and Technology | Petroleum Institute

### **Dr. Xianfan Xu**

James J. and Carol L. Shuttleworth Professor of Mechanical Engineering  
Purdue University



SYMPOSIUM WEBSITE: <http://thermosymposium.nist.gov>

# TECHNICAL AREAS AT THE 20th SYMPOSIUM

- Correlations, Databases, and Engineering Equations of State  
*Eric Lemmon (NIST) & Roland Span (Ruhr Univ. - Bochum)*
- Fluid Property Measurements  
*Diego Cristancho (Dow Chemical) & Elisabeth Mansfield (NIST)*
- Instrumentation and Measurement Techniques  
*Tom Bruno (NIST) & Tara Fortin (NIST)*
- Inverse Problems and Non-destructive Evaluation  
*Xavier Maldague (Laval Univ.), Roberto Li Voti (Univ. Rome), & Andreas Mandelis (Univ. Toronto)*
- Ionic Liquids  
*Joan Brennecke (Univ. Texas)  
& José Nuno Canongia Lopes (Instituto Superior Técnico - Lisbon)*
- Molecular Simulation  
*Andrei Kazakov (NIST) & Michael Shirts (Univ. Colorado Boulder)*
- Non-equilibrium Thermodynamics  
*Fernando Bresme (Imperial College) & David Reguera (Univ. Barcelona)*
- Optical and Thermal Radiative Properties  
*Zhuomin Zhang (Georgia Tech) & Leonard Hanssen (NIST)*
- Photothermal and Photoacoustic Techniques  
*Andreas Mandelis (Univ. Toronto)*
- Properties for Materials Science at High Temperatures  
*Doug Matson (Tufts Univ.) & Gernot Pottlacher (TU Graz)*
- Properties of Aqueous Systems  
*Andre Anderko (OLI Systems) & Josef Šedlbauer (Univ. Liberec)*
- Properties for Fuels and Energy Systems  
*Sergio Quiñones-Cisneros (F-Thermo Services GmbH)  
& Kurt Schmidt (Schlumberger Technology Corp.)*
- Properties of Polymers  
*Chad Snyder (NIST) & Debra Audus (NIST)*
- Properties of Solids  
*Heng Ban (Utah State Univ.) & Ursula Kattner (NIST)*
- Properties of Working Fluids including Refrigerants  
*Mark McLinden (NIST) & Stephanie Outcalt (NIST)*
- Theory of Thermophysical Properties  
*Clare McCabe (Vanderbilt Univ.) & Amparo Galindo (Imperial College)*
- Thermal Properties of Nanostructured Materials  
*Xinwei Wang (Iowa State Univ.) & Ronggui Yang (Univ. Colorado Boulder)*
- Thermophysical Methods for Biomaterials and Biosystems  
*Juan José Alvarado-Gil (CINVESTAV IPN) & Andreas Mandelis (Univ. Toronto)*
- Thermophysical Properties of Polyamorphic Fluids  
*Mikhail Anisimov (Univ. Maryland) & Frédéric Caupin (Lyon Univ.)*
- Wetting, Interfaces, and Membranes  
*Marcus Müller (Univ. Göttingen) & Carolyn Koh (Colorado School of Mines)*

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Posters and Software Demonstrations may cover any topic area of the Symposium.

- Posters  
*Joe Magee (NIST) & Jason Widegren (NIST)*
- Software Demonstrations  
*Vladimir Diky (NIST)*

## ABOUT THE CONFERENCE

This is the Twentieth Symposium of the well-established series of conferences on thermophysical properties. The Symposium is concerned with theoretical, experimental, simulation, and applied aspects of the thermophysical properties of gases, liquids, and solids, including biological systems. Appropriate topics are:

- *Thermodynamic Properties*, including equations of state, phase equilibria,  $p$ - $V$ - $T$  behavior, heat capacity, enthalpy, thermal expansion, sound speed, and critical phenomena.
- *Transport Properties*, including thermal and electrical conductivity, viscosity, mass diffusion, thermal diffusion, non-Newtonian behavior, thermal, thermoacoustic, and other diffusion waves.
- *Optical and Thermal Radiative Properties*, including dielectric constant, refractive index, emissivity, reflectivity, and absorptivity.
- *Interfacial Properties*, including solid-solid interfaces, surface tension, interfacial profiles, interfacial transport, and wetting.
- *Data Correlation*, including data evaluation and prediction, standard reference data, databases, and storage and retrieval of thermophysical property data.

The ASME Yeram S. Touloukian Award will be presented at the Symposium; the deadline for nominations is September 1, 2017. Information on the award and nominations is available on the Touloukian Award page of the conference website. An Early Career Poster Awards program will be included in the Symposium.

## GENERAL INFORMATION

All technical sessions will be held at the University of Colorado, Boulder, Colorado, U.S.A. The Symposium is organized by the National Institute of Standards and Technology and the Joint ASME-AIChE Committee on Thermophysical Properties.

### Co-Chairs of the Symposium

**Dr. Daniel G. Friend**

**Dr. Marcia L. Huber**

**Dr. Kenneth Kroenlein**

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National Institute of Standards and Technology  
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For further information, please access the Symposium web site at

**<http://thermosymposium.nist.gov>**

or contact the organizers at **[symp20@nist.gov](mailto:symp20@nist.gov)**.